

IN THE DRAWINGS

The two attached sheets of drawings include changes to Figures 6 and 7.

Attachment: 2 Replacement Sheets

REMARKS/ARGUMENTS

Favorable reconsideration of this application as presently amended and in light of the following discussion is respectfully requested.

Claims 1, 17-34, 43-48, and 51 are presently pending in this case. Claims 1, 17, and 43-48 are amended and new Claim 51 is added by the present amendment. As amended Claims 1, 17, and 43-48 and new Claim 51 are supported at least by the original disclosure, no new matter is added.

In the outstanding Official Action, the drawings were objected to; Claims 1, 17-21, 28, 44, 45, 47, and 48 were rejected under 35 U.S.C. §103(a) as unpatentable over Ogawa et al. (U.S. Patent No. 5,787,179, hereinafter “Ogawa”) in view of Seidel et al. (U.S. Patent Application Publication No. 20010055290, hereinafter “Seidel”); Claims 22-27, 29, and 30 were rejected under 35 U.S.C. §103(a) as unpatentable over Ogawa in view of Seidel and further in view of Billhartz et al. (U.S. Patent Application Publication No. 20030210788, hereinafter “Billhartz”); and Claims 43 and 46 were rejected under 35 U.S.C. §103(a) as unpatentable over Ogawa in view of Seidel and further in view of Akiyama et al. (U.S. Patent No. 6,460,137, hereinafter “Akiyama”). Claims 31-34 were allowed.

Applicant acknowledges with appreciation the allowance of Claims 31-34.

Applicants and Applicants’ representatives thank Examiner Su for the courtesy of the interview granted to Applicants’ representatives on March 16, 2011. During the interview, proposed amendments to the claims were discussed with regard to how the proposed amendments overcome the rejections of record. Examiner Su agreed that proposed amendments as submitted herewith appear to overcome the rejections of record.

With regard to the objection to the drawings, Figures 6 and 7 are amended to delete labels 230, 260, and 300. Accordingly, the objection to the drawings is believed to be overcome.

With regard to the rejection of Claims 1, 17, 44, 45, and 47-49 as unpatentable over Ogawa in view of Seidel, that rejection is respectfully traversed.

Amended Claim 1 recites in part:

a transmitter configured to generate and to transmit a signal including
a physical layer header section; and
a data section,
the transmitter configured to generate a scrambling initial value using at least a part of the physical layer header section, ***the transmitter configured to count a number of logics "1" and a number of logics "0" in said part of the physical layer header section, the transmitter configured to generate the scrambling initial value based on the number of logics "1" and the number of logics "0" in said part of the physical layer header section,*** the transmitter configured to scramble the data section using the scrambling initial value, the transmitter configured to transmit the physical layer header section using a first modulation method and a first encoding rate with a first signal to noise ratio, the transmitter configured to transmit the data section using a second modulation method and a second encoding rate with a second signal to noise ratio, the first signal to noise ratio being less than the second signal to noise ratio; and
a receiver configured to receive a signal from the transmitter, the receiver generating a descrambling initial value using at least a part of the physical layer header section, the receiver descrambling the data section using the descrambling initial value.

With regard to original Claim 23, the outstanding Office Action conceded that Ogawa in view of Seidel does not describe the subject matter of Claim 23 and asserted that Billhartz describes that feature in paragraph 31 thereof. Paragraph 31 of Billhartz describes that counters can be used to generate an initialization vector (IV). However, Billhartz does not describe what exactly these counters would count, much less that the described device would count a number of logics "1" and a number of logics "0" in a part of a physical layer header section and then base an IV on the number of logics "1" and the number of logics "0", as now recited in Claim 1. Accordingly, it is respectfully submitted that Billhartz cannot teach or suggest "a transmitter" as defined in amended Claim 1, and Ogawa and Seidel do not cure

this deficiency of Billhartz. Therefore, Claim 1 (and Claim 51 dependent therefrom) is patentable over Ogawa in view of Seidel and further in view of Billhartz.

Independent Claims 17, 44, 45, and 47-49 all recite that a number of logics "1" and a number of logics "0" in a part of a physical layer header section are counted, and then a scrambling initial value is generated based on the number of logics "1" and the number of logics "0", albeit in different statutory formats than Claim 1. As noted above, Billhartz does not describe what exactly the counters described in paragraph 31 would count, much less that a number of logics "1" and a number of logics "0" in a part of a physical layer header section are counted and an IV is based on the number of logics "1" and the number of logics "0". Therefore, Claims 17, 44, 45, and 47-49 (and all claims dependent therefrom) are also patentable over Ogawa in view of Seidel and further in view of Billhartz.

With regard to rejection of Claims 43 and 46 as unpatentable over Ogawa in view of Akiyama, that rejection is also respectfully traversed.

Amended Claim 43 recites in part:

generating a physical layer header of a transmission packet;
inverting a parity signal in said physical layer header, and setting predetermined data included in said physical layer header as an initial value in the internal state of said scrambler, in the event of indicating that an initial value should be set in said internal state, ***the inverting including counting a number of logics "1" and a number of logics "0" in said part of the physical layer header section and generating the initial value based on the number of logics "1" and the number of logics "0" in said part of the physical layer header section***; and
subjecting a signal to be processed in said transmission packet to a predetermined arithmetic operation according to the internal state of said scrambler, and outputting a processed transmission packet; and
transmitting the processed transmission packet over a communication channel using a transmitter, the transmitting including
transmitting the physical layer header section using a first modulation method and a first encoding rate with a first signal to noise ratio, and

transmitting the data section using a second modulation method and a second encoding rate with a second signal to noise ratio, the first signal to noise ratio being less than the second signal to noise ratio.

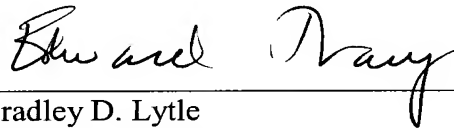
As noted above, Ogawa in view of Seidel and further in view of Billhartz does not teach or suggest the above highlighted feature. Moreover, it is respectfully submitted that Akiyama does not cure this deficiency of Ogawa, Seidel, and Billhartz. Accordingly, Claim 43 is patentable over Ogawa in view of Seidel and further in view of Billhartz and Akiyama.

Further, as Claim 46 also recites the above highlighted feature, Claim 46 is also patentable over Ogawa in view of Seidel and further in view of Billhartz and Akiyama.

Accordingly, the pending claims are believed to be in condition for formal allowance. An early and favorable action to that effect is respectfully requested.

Respectfully submitted,

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